Claims

What is claimed is:

1. A chimeric adenovirus comprising at least a part of a fiber protein of an adenovirus serotype providing the chimeric virus with a desired host range and at least a part of a penton or hexon protein from another less antigenic adenovirus serotype resulting in a less antigenic chimeric adenovirus.

2. A recombinant vector derived from an adenovirus comprising at least one ITR and a packaging signal having an insertion site for a nucleic acid sequence of interest, and further having an insertion site for functionally inserting a gene encoding a penton and/or a hexon protein of a first serotype of adenovirus and having an insertion site for a gene encoding a fiber protein of a second adenovirus of a different serotype.

3. The recombinant vector of claim 2 which is a plasmid.

4. A packaging cell for producing a chimeric adenovirus according to claim 1, said packaging cell comprising, in trans,

all elements necessary for adenovirus production not present on a vector derived from an adenovirus, said vector comprising at least one ITR and a packaging signal having an insertion site for a nucleic acid sequence of interest, and further having an insertion site for functionally inserting a gene encoding a penton and/or a hexon protein of a first serotype of adenovirus and having an insertion site for a gene encoding a fiber protein of a second adenovirus of a different serotype.

5. A kit of parts comprising a packaging cell according to claim 4 and a recombinant vector derived from an adenovirus comprising at least one ITR and a packaging signal having an insertion site for a nucleic acid sequence of interest, and further having an insertion site for functionally inserting a gene encoding a penton and/or a hexon protein of a first serotype of adenovirus and having an insertion site for a gene encoding a fiber protein of a second adenovirus of a different serotype, whereby there is essentially no overlap leading to recombination resulting in the production of replication competent adenovirus between said cell and said vector.

6. The kit of parts of clam 5 wherein said recombinant vector is a plasmid.

7. The recombinant vector of claim 2 wherein the insertion sites are different and preferably unique restriction sites.

8. The recombinant vector of claim 3 wherein the insertion sites are different and preferably unique restriction sites.

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9. A method for producing a chimeric adenovirus having a desired host range and diminished antigenicity, said method comprising

providing a recombinant vector derived from an adenovirus comprising at least one ITR and a packaging signal having an insertion site for a nucleic acid sequence of interest, and further having an insertion site for functionally inserting a gene encoding a penton and/or a hexon protein of a first serotype of adenovirus and having an insertion site for a gene encoding a fiber protein of a second adenovirus of a different serotype;

inserting into said vector at least a functional part of a penton or hexon protein derived from an adenovirus serotype having relatively low antigenicity,

inserting at least a functional part of a fiber protein derived from an adenovirus serotype having the desired host range;

transfecting said vector in a packaging cell according to claim 4; and

producing chimeric viral particles.

10. A method according to claim 9, wherein the reduced antigenicity is a diminished capability to raise neutralizing antibodies.

11. The chimeric adenovirus of claim 1, wherein the hexon, penton and/or fiber proteins are chimeric proteins originating from different adenovirus serotypes.

12. A nucleic acid library comprising nucleic acid derived from different adenovirus serotypes.

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